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BULLETIN
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Notes on a Collection of Cuban Pteridophyta, with Descriptions of four
new Species

BY LUCIEN M. UNDERWOOD AND WILLIAM R. MAXON

Early in the present year a party consisting of Messrs. Charles Louis Pollard and William Palmer of the United States National Museum, and Dr. Edward Palmer left Washington on a brief collecting expedition to eastern Cuba. Out of some 425 numbers of plants secured no less than 144 are Pteridophyta. These have been placed in our hands for determination. In the following notes four species—one in each of the genera *Alsophila*, *Polypodium*, *Asplenium*, and *Diplazium*—are described as new. Several others, mentioned below as probably undescribed, we have not cared to diagnose at the present time on account of insufficient or sterile material. The other notes are in the nature of comments on rare species and unusual forms or in explanation of nomenclatorial confusion.

***Alsophila gracilis* sp. nov.**

Stipes elongate, slender, deeply triple-grooved on the anterior face, about 7 mm. in the greatest diameter, pale brown, densely armed with short spines; pinnae 30–35 cm. long with 14–16 pairs of deeply pinnatifid pinnae, the lowest 1–2 cm. from the main rachis; pinnules 6–8 cm. long, 1.5–1.7 cm. wide, formed of about 8–13 segments on either side; lower pinnules on short stalks (5 mm. or less) which diminish upward so that the uppermost pinnules are sessile; segments oblong-falcate, coriaceous, smooth on both sides, the margins crenate, incurved; the apex attenuate and crenate; veins mostly once-forked, bearing the globular sori near the middle.

The species is founded upon sheets no. 403248 and no. 403247 in the U. S. National herbarium, representing no. 255

collected by Charles L. Pollard, Dr. Edward Palmer, and William Palmer in the vicinity of Baracoa, Santiago province, Cuba, February 1-7, 1902. A sheet of the same number in the herbarium of the New York Botanical Garden has a longer portion of the stipe. Both herbaria contain earlier specimens collected in eastern Cuba by Charles Wright and distributed (no. 951) as *Alsophila nitens* J. Sw.

ANEMIA HIRTA Sw. ?

Numbers 121 and 401 are well matched by a sheet in the U. S. National herbarium (no. 26037) from Jamaica. They represent what Jenman regarded as the true *Anemia hirta* of Swartz, and are presumably what Swartz had in hand when describing this species. They are, however, scarcely the plant represented by Plumier's plate 157 (which Swartz cites), from Martinique.

ORNITHOPTERIS sp.

The specimens of number 232, though probably representing an undescribed species, are sterile and therefore unsatisfactory for purposes of description.

ELAPHOGLOSSUM APODUM (Kaulf.) Schott

Acrostichum apodum Kaulf. Enum. Fil. 59. 1824.

Elaphoglossum apodum Schott, Gen. Fil. pl. 15. 1834.

Acrostichum platyneuron Feé, Mém. Fam. Foug. 2 : 43. pl. 4. f. 1. 1844-45; non L.

The plants collected as no. 152 are certainly identical with Feé's species, judging from both the admirable plate and description; but we do not feel justified in regarding Feé's species as distinct from the *Acrostichum apodum* of Kaulfuss. Hooker and Greville published (Ic. Fil. 1 : pl. 99. 1829), a figure of *A. apodum* which matches several sheets at hand, under this name, as well as the new material (no. 152). Feé recognized *A. apodum* as a distinct species; but Moore in transferring *A. platyneuron* to *Elaphoglossum* (Ind. Fil. 364. 1862), hazards the suggestion "*An E. apodum.*" Whether or not the two are one, the name *Elaphoglossum platyneuron* is not available, for the reason that *Acrostichum platyneuron* Feé is antedated by the Linnaean *Acrostichum platyneuron*.

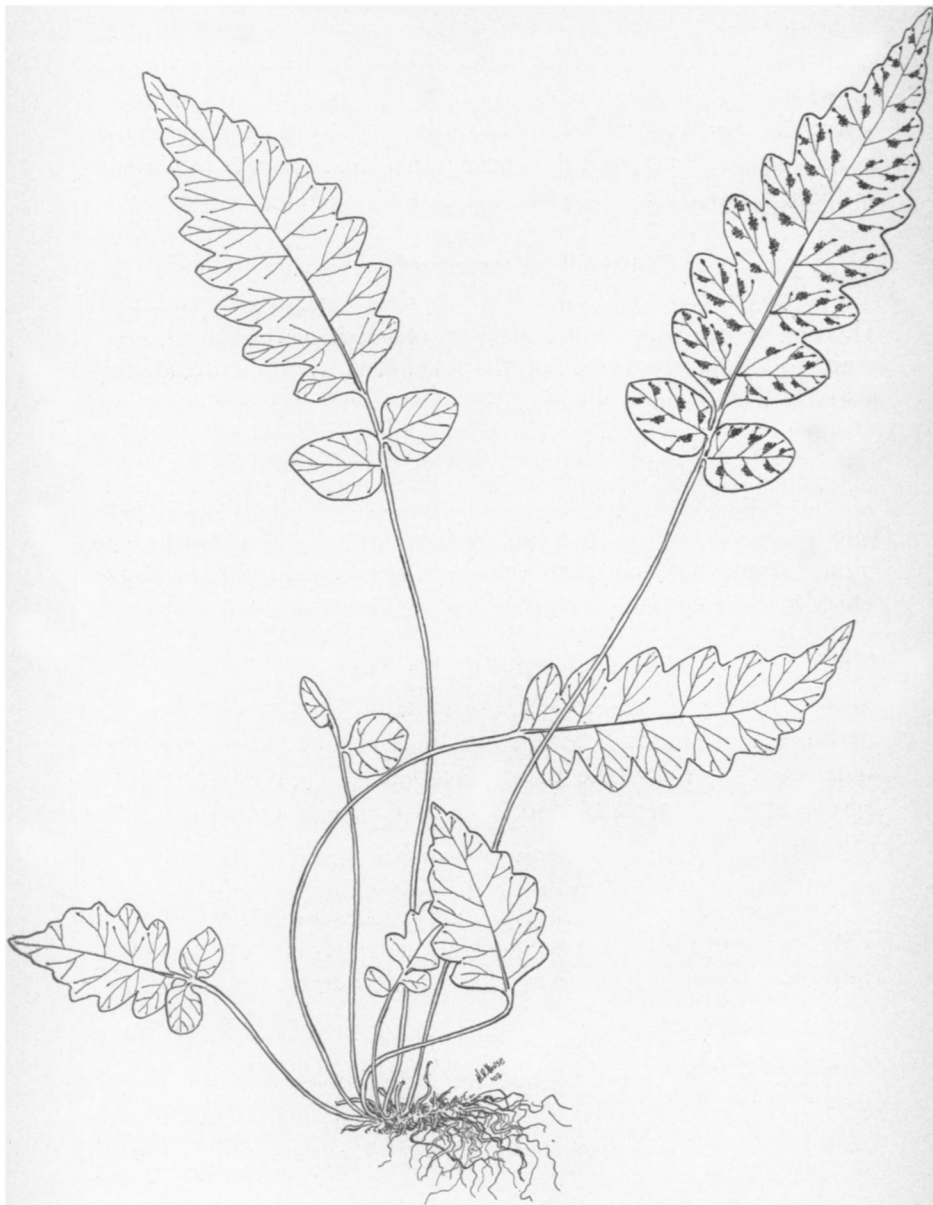
LOMARIOPSIS WRIGHTII Mett.

Of this there are two numbers, both collected near Baracoa — a single sheet of no. 150, but no. 220 in some quantity — and both are quite sterile. The species was described in Eaton's "Filices Wrightianae et Fendlerianae" (Mem. Am. Acad. II. 8: 195. 1863) and is readily distinguishable by the remarkable abruptly caudate apices of the pinnae.

Polypodium cryptum sp. nov.

Plant of small stature, 10–17 cm. high. Rootstock creeping, 1–2 cm. long, about 5 mm. thick; stipes variable in length, commonly 1.5 to 2 times the length of the lamina, articulated, somewhat pubescent, and of a dull greenish straw color: laminae lanceolate, 4.5–7.5 cm. long, greatest width about 2 cm., simple, pinnately lobed, or for the most part partially pinnate below, the lowermost pair of lobes commonly developed into distinct sessile or very short-stipitate orbicular or orbicular-cordate pinnae, the next pair rarely approaching this condition, the upper lobes merely broad obtuse crenations which decrease gradually toward the tapering obtuse apex; venation free, the midvein of each lobe giving off on either side about 4 usually simple veinlets which are enlarged at their extremities: sori somewhat immersed, broadly elliptical, borne one to the veinlet almost exactly half way from the midve into the extremity.

The species is based on sheet no. 403232 in the U. S. National herbarium, representing specimens collected as no. 231 by Charles L. Pollard, Dr. Edward Palmer and Wm. Palmer in the vicinity of Baracoa, Santiago province, Cuba, February 1–7, 1902. The specimens are not in the best condition for study, having somewhat of a weatherbeaten appearance. They are, however, uniform in size and general appearance, appear quite mature and are of such peculiar general morphology that we have thought it best to describe them as a new species which we refer with more or less hesitation to the genus *Polypodium*. The anomalous features are the hidden venation, the unique lobation and the immersed sori. The venation is indeed very well concealed and can scarcely be discerned except by holding the unmounted plant towards strong light. Only the basal veinlets of the lowermost lobes in the larger fronds fork commonly and these only once or twice, most of the veinlets being simple.



POLYPODIUM CRYPTUM

A majority of the plants have the appearance of being quite glabrous; but careful examination of a more perfect specimen shows that the lower portions of the stipe possess an inconspicuous soft stellate pubescence which becomes more scattering above but is rather noticeable on the midvein and lower veins of the frond, and that the margin of the frond is sparingly ciliate.

GONIOPHLEBIUM PILOSELLOIDES (L.) J. Sm.

To this species we have referred numbers 47, 181 and 182. There is to be observed considerable variation, particularly in the shape of the sterile leaf; but the specimens are undoubtedly all referable to the single species.

CAMPYLONEURON REPENS (L.) Presl.

The need of a critical study of the group to which this species belongs, in connection with the types preserved in European herbaria, permits no closer determination of no. 184 than the above which is to be considered merely tentative.

ADIANTUM FRUCTUOSUM Pöppig

We have not seen herbarium material of this species, but judging from the excellent description there can be little doubt that under no. 66 we have the plant described by Pöppig in Sprengel, Syst. Veg. 4: 113. 1827, and later by Kunze in Linnaea, 9: 81. 1834.

ADIANTUM FRAGILE Sw.

The specimens of no. 421, although very uniform, are unusual in the shape of the segments which are narrowly cuneate and often somewhat bilobed. Otherwise they seem quite typical.

STRUTHIOPTERIS sp.

The material comprising number 146 consists of sterile leaves only. The species, which is probably undescribed is one of the several forms to which the name *Lomaria attenuata* Willd. is usually given.

Asplenium venustum sp. nov.

Plant 35–67 cm. high. Leaves closely tufted from a nearly naked stoutish suberect rootstock: stipe 15–37 cm., dull grayish-brown: lamina ovate-lanceolate, the apical portion long acuminate,

once or twice cleft below, otherwise similar to the pinnae; pinnae 5-7 pairs, linear, subcoriaceous, subopposite below, alternate above, ordinarily diverging from the axis at an angle of about 30° , the 3 or 4 lowermost pairs 11-15 cm. long and 7-11 mm. broad (at the broadest point, which is about one third the distance from base toward apex); base of pinna narrowly and very obliquely cuneate (becoming stipitate), apparently never auricled, the superior portion only a trifle wider than the inferior; margin unequally biserrate (in large fronds occasionally triserrate), the teeth rather slender, acute and outwardly curved; veins very oblique, forking usually once; sori 1-2.7 cm. long, borne on the anterior branch and nearly parallel to the midvein; indusium firm.

The above description is drawn from two sheets, nos. 403185 and 403298 in the U. S. National herbarium, representing no. 139 collected by Charles L. Pollard and Wm. Palmer on "slopes and summit of El Yunque, near Baracoa, Santiago province, Cuba. Alt. 1000-2000 feet, January 30-31, 1902. "The species seems to us very distinct; certainly it has nothing to do with *Asplenium erosum* L.,* with it has, in one instance, been confused, — we refer to the reference here of Wright's no. 1043 as "var. *pinnis angustissimis*." † Wright's no. 1043 as represented in the National herbarium (sheet no. 26435) is exactly our plant, though the fronds bear an additional pair or two of pinnae. Reference to Sloane's plate 33, fig. 2, cited by Linnaeus under *A. erosum*, is sufficient to disprove any supposed alliance with the plants there represented.

Asplenium venustum is easily distinguished by the extreme narrowness of the pinnae, their peculiar hacked appearance on account of the acute flaring teeth, and by their extremely oblique gradually narrowed bases. Sheet no. 403185 bears a typical plant 3.8 dm. high, comprising 10 overlapping fronds. Sheet no. 403298 contains a juvenile plant and a single detached frond 6.7 dm. high.

ASPLENIUM MONTEVERDENSE Hooker

This rare species was described in *Species Filicum*, 3: 195. 1860 and figured in Hooker's 2d Century of Ferns, *pl.* 41. 1861. It was founded on C. Wright's no. 1029 collected, in 1859, "under overhanging rocks near Monte Verde, on the eastern side

* Sp. Pl. ed. 2, 2: 1539. 1764.

† Sauvalle, Fl. Cubana, 211. 1878.

of Cuba." The specimens of the present collection (no. 117) are much larger than the original, or indeed than the other specimens we have seen, which are: (1) Matanzas, Cuba, 1849, *Rugel*, 9 (C); (2) Eastern Cuba, 1856-1857, *Wright*, 856 (Y). Except in size the plants (117) agree well with the original description and plate.

***Diplazium aemulum* sp. nov.**

Plant 40-60 cm. high. Leaves borne in a close crown on a rather slight erect rootstock: stipes 1-2 dm., sparingly paleaceous below with firm dark brownish linear or linear-lanceolate long attenuate scales: large mature lamina broadly lanceolate, broadest just below the middle, dark green, paler beneath, comprising 20 or less pairs of lanceolate pinnae, the lowermost of which diverge from the rachis at an angle of about 70°, the uppermost at from 45° to 60°: pinnae spreading, subopposite below, soon becoming alternate above, the largest 1 dm. long by 1.7 cm. wide, lanceolate, terminating rather abruptly in a serrulate attenuate somewhat falcate apex, the base cuneate (the lower edge much more obliquely so than the upper), the margin pinnatifid into shallow obtusish lobes (about 12), which are regularly serrate by the free repeatedly forking veinlets extending to the margin; sori linear, curved, averaging 5 mm., borne on the first anterior of each group of veinlets; indusia both single and double, the former perhaps predominating.

Type specimen, no. 403220 in the U. S. National herbarium collected on the "slopes and summit of El Yunque, near Baracoa, Santiago province, Cuba, January 30-31, 1902, by Charles L. Pollard and William Palmer; no. 179, altitude 1000-2000 feet." We would also refer here no. 159, same data.

The type sheet consists of a rather small plant about 4 dm. high and a single detached fully matured leaf measuring about 6 dm. The latter is larger than most of the specimens distributed, so that the measurements here given probably represent nearly the maximum for the species. The shallow lobation so characteristic of the larger pinnae is manifest in the smaller ones in less degree and commonly only as an irregular double serration.

DRYOPTERIS LONCHODES (D. C. Eaton) Kuntze

Aspidium lonchodes D. C. Eaton, Mem. Am. Acad. II. 8: 210. 1863.

Dryopteris lonchodes Kuntze, Rev. Gen. Pl. 2:813. 1891.

This species was described from nos. 1007 and 1008 of Wright's Cuban plants. The specimens (no. 239) of the present collection agree closely with the type and represent a remarkably distinct species. We have seen no other specimens.

***Polystichum aquifolium* nom. nov.**

Polystichum ilicifolium Feé, Gen. Fil. 279. 1850-52. Not *P. ilicifolium* Moore, Ind. Fil. 94. 1858, which is *Aspidium ilicifolium* Don, Prodr. Nep. 3. 1825.

We have little hesitation in pronouncing the *Polystichum ilicifolium* of Feé, described from specimens collected by Linden in Santiago province, Cuba, quite distinct from *P. triangulum* or any other species of this group. The name *ilicifolium* is quite untenable by reason of Don's species having been properly transferred to *Polystichum* by Moore. Feé's choice of a specific designation was, however, so much to the point that we can do no better than substitute *aquifolium*, the long-used generic name for the holly.

No. 420 comprises specimens collected near El Cobre, Santiago province, Cuba, by Messrs. Charles L. Pollard and William Palmer, February 21-24, 1902, which are identical with Feé's plants as represented by *pl. ♂. f. 4* in his 6th Mémoire (1854).

DANAEA NODOSA (L.) J. Sm.?

A sterile leaf or two of a *Danaea*, collected as number 142, show certain differences from the true *Danaea nodosa*, notably in the extreme closeness of the venation which averages 18 veinlets per centimeter; but neither stipe nor sporophyll being at hand it seems best not to separate as a distinct species.